

A New Species of the Genus *Heptathela* (Araneae: Liphistiidae) from Vietnam¹⁾

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小野展嗣²⁾：ベトナム産キムラグモ属

(クモ目：ハラフシグモ科) の 1 新種¹⁾

Abstract A new species of the spider genus *Heptathela* belonging to the family Liphistiidae is described from Tam Dao, northern Vietnam under the name of *Heptathela tomokunii* sp. nov. The spiders of the species built retreats with a trapdoor typical for the Heptathelinae. A close relationship is recognized between this new species and *Heptathela tonkinensis* (BRISTOWE, 1933) described from the area of Song Luc Nam, about 100 km east of the type locality of the new species.

In the beginning of this century, a liphistiid spider was discovered by BLAISE in Tonkin, northern Vietnam of those days. A male specimen collected in a forest near Kha-lé in the area of Song Luc Nam [River], northeast of Hanoi was identified by SIMON (1908) with *Liphistius birmanicus* THORELL, 1897, originally described from Burma. In the first revisional work on liphistiid spiders, BRISTOWE (1933) examined the same specimen and pointed out a misidentification by SIMON. He gave a new name, *Liphistius tonkinensis*, for "*L. birmanicus*" from Vietnam. Though his treatment was taxonomically not correct, the explanations and illustrations including a figure of male palp made by BRISTOWE were regarded as original.

Having examined the type specimen of *Liphistius tonkinensis*, HAUPT (1983) and PLATNICK and SEDGWICK (1984) respectively transferred the species to the genus *Heptathela* KISHIDA, 1923 on the basis of characteristics of the male palp. The species of the genus *Heptathela* build retreats with a trapdoor but without radiating threads, while those of *Liphistius* dig tubular burrows with a trapdoor and fishing lines. The retreat of *Heptathela tonkinensis* is unknown, because the spider has never been collected since its first record excluding biological informations. Lying between the distributional ranges of *Heptathela* and *Liphistius* nowhere overlapping each other (ONO, 1990), Vietnam has a great significance from the viewpoint of zoogeography and phylogeny.

In the autumn of 1995, I had an opportunity to participate in an entomological expedition to Vietnam made by the National Science Museum, Tokyo. Many spider specimens including a series of specimens of a liphistiid spider were obtained at Tam Dao, about 60 km northwest of Ha-noi. The spiders built retreats with a trapdoor

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typical for the genus *Heptathela*. After a morphological examination, I recognized that the spider is closely related to *Heptathela tonkinensis* but is specifically different from the latter and new to science. In the present paper, the new species will be described.

The type specimens of the new species are deposited in the collection of the Department of Zoology, National Science Museum, Tokyo. The abbreviations herein used are as follows: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye.

Before going further, I wish to express my sincere thanks to Prof. HA Quang Hung, Department of Entomology, Ha-noi Agricultural University, Vietnam, Dr. Hiromu KURAHASHI, Department of Medical Entomology, National Institute of Health, Tokyo, and Drs. Masaaki TOMOKUNI and Shuhei NOMURA, Department of Zoology, National Science Museum, Tokyo, for their kind aid in my field research.

Family Liphistiidae

Heptathela tomokunii sp. nov.

(Figs. 1-8)

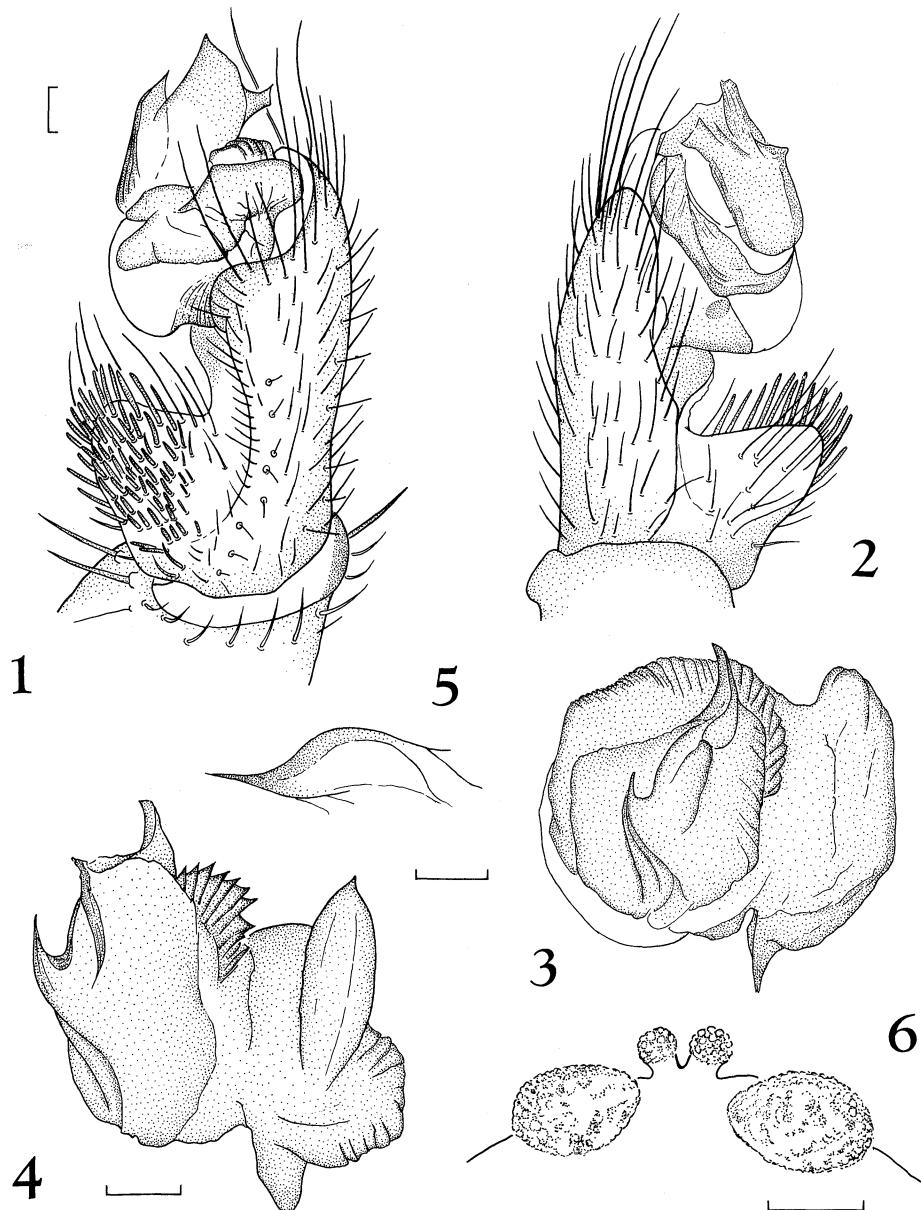
Diagnosis. This new species is closely related to *Heptathela tonkinensis* (BRISTOWE, 1933), described from Kha-lé in the area of Song Luc Nam, about 100 km east of the type locality of the new species, Tam Dao, but is distinguished from the latter by the shape of conductor on male palp. The conductor of *Heptathela tomokunii* is simple and acute, while that of *H. tonkinensis* is apically denticulated (cf. Fig. 5 and HAUPT, 1983, p. 287, fig. 12e). In a diagram of phylogenetic relationships of species of the genus *Heptathela* and *Ryuthela* proposed by HAUPT (1990), *Heptathela tonkinensis* is isolated from the main stem with Japanese and Chinese species. The female of *H. tonkinensis* is unknown.

Type series. Holotype: ♂, Tam Dao, ca. 900 m alt., Vinh Phu Prov., Vietnam, 21-IX-1995 as immature, adult on 8-X-1995 after breeding at laboratory, H. ONO leg. (NSMT-Ar 3396); allotype: ♀, same locality and collector as for the holotype, 25-IX-1995 (NSMT-Ar 3397); paratypes: 5 ♀, same locality and collector as for the holotype, 23-25-IX-1995 (NSMT-Ar 3398-3400).

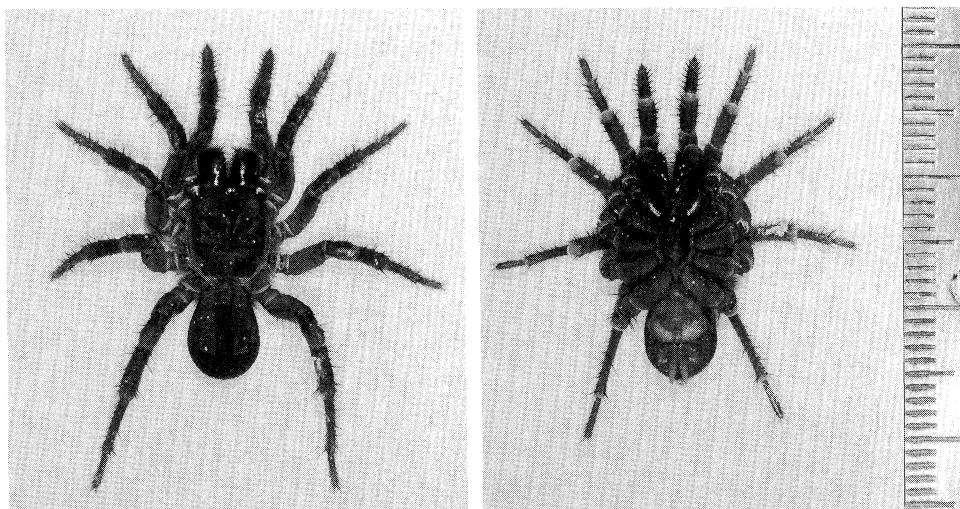
Other specimens examined. 3 juv. ♀, 9 juv., same locality and collector as for the holotype, 21-23-IX-1995 (NSMT-Ar 3453-3454).

Description. Measurement based on the holotype and allotype. Body length ♀ 17.0 mm, ♂ 10.6 mm; prosoma length ♀ 7.2 mm, ♂ 4.8 mm, width ♀ 6.3 mm, ♂ 4.4 mm; opisthosoma length ♀ 8.7 mm, ♂ 5.8 mm, width ♀ 6.9 mm, ♂ 4.6 mm; lengths of palps and legs [total length (femur+patella+tibia+metatarsus+tarsus)]: ♀, palp 14.1 mm (4.7+2.7+3.0+-+3.7), leg I 15.9 mm (5.1+2.7+3.2+3.3+1.6), II 16.0 mm (5.1+2.7+3.1+3.4+1.7), III 16.6 mm (5.0+2.5+3.0+4.1+2.0), IV 24.7 mm (7.2+2.8+4.8+7.0+2.9), ♂ palp 9.5 mm (2.4+1.7+3.0+-+2.4), leg I 15.2 mm (4.3+1.9+3.2+3.8+2.0), II 15.4 mm (4.4+1.8+3.1+4.2+1.9), III 17.2 mm (4.6+2.0+3.3+5.1+2.2), IV 22.4 mm (5.8+2.0+4.4+6.7+3.5). Variation of body length: ♀ 12.7-17.0 mm.

Prosoma longer than wide, head high; ocular tubercle wider than long or as long as wide, ALE>PLE>PME>AME (♀ nearly 9:8:7:1, ♂ 10:8:6:1), AME very small, clypeus wider than ALE-ALE, median ocular area trapezoidal, wider than long. Chelicera with 11-12 (♀) or 9 (♂) teeth on promargin of fang furrow. Leg formula



Figs. 1-6. *Heptathela tomokunii* sp. nov. —— 1, Male palp, retrolateral view; 2, same, prolateral view; 3, bulb, distal view; 4, same, retrolatéro-distal view; 5, conductor, prolateral view; 6, female genitalia, dorsal view (scales: 0.2 mm).



Figs. 7-8. *Heptathela tomokunii* sp. nov., female (a paratype). — 7 (Left), dorsal view; 8 (right), ventral view (scale: 1 mm).

IV, III, II, I; legs of males much longer than those of females; superior claws of tarsi each with 2 or 3 teeth in female, with 3 teeth in male, inferior claws small and without tooth in both the sexes. The claw of female palp with a tooth.

Male palp (Figs. 1-5). Tibia without apophysis. Bulb (Figs. 1-2) relatively simple, distal sclerites in three parts. Embolus wide lamella, with two peaks, contrategulum with serrated margin (Fig. 3), tegulum weakly serrated and with a glabrous apophysis (Fig. 4), conductor small and spiniform (Fig. 5).

Opisthosoma ovate, longer than wide; posterior median spinnerets reduced and fused, paired peak with setae recognizable.

Female genitalia (Fig. 6) wide. Two pairs of ovate spermathecae present, the median ones small and close to each other, the lateral ones very large.

Coloration and markings (Figs. 7-8). ♀ Prosoma light brown or chestnut, ocular tubercle black; chelicera light brown, proximally lighter, fang reddish brown, sternum and coxae of legs and palps brown, other segments of legs and palps light yellowish brown without annulations. Opisthosoma grey, darker at the middle, dorsal sclerites beige mottled with greyish brown; ventral sclerites and spinnerets light yellowish brown. The holotype ♂ totally discoloured and yellow.

Biology. The spiders of this new species were found in evergreen broad-leaved forests around the village of Tam Dao, about 900 m alt. (Figs. 9-10). They built retreats with a trapdoor typical for the genus *Heptathela*. The trapdoors have about 20-25 mm in diameter, and the depth of a tube is about 20 cm. Only one male collected was immature in the latter part of September; one female was found with some spiderlings.

Distribution. Vietnam (known only from the type locality).

Remarks. This species is dedicated to Dr. Masaaki TOMOKUNI, Tokyo.



Figs. 9-10. Habitat of *Heptathela tomokunii* sp. nov. at Tam Dao, northern Vietnam.
— 9, An evergreen broad-leaved forest on the western slope of Mt. Tam Dao; 10,
a narrow path at the type locality.

摘要

ペトナム産のキムラグモ属(クモ目: ハラフシグモ科)の1新種, *Heptathela tomokunii*

ONO, 1997 を記載した。本種はすでにベトナムから知られる *Heptathela tonkinensis* (BRISTOWE, 1933) と近い類縁関係が認められるが、conductor の形状により区別される。後者の基準産地は本新種のそれの約 100 km 東方である。本種の住居は典型的なキムラグモ属のものであった。

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